

From the
INTERNATIONAL PRELIMINARY EXAMINING AUTHORITY

To:

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28 2004

15.06.04

PCT

WRITTEN OPINION OF THE
INTERNATIONAL PRELIMINARY
EXAMINING AUTHORITY

(PCT Rule 66)

Date of mailing
(day/month/year)

16-04-2004

Applicant's or agent's file reference

NM5220-0140

REPLY DUE

within 60 days from
the above date of mailing

International application No.

PCT/IB2002/003373

International filing date (day/month/year)

21-08-2002

Priority date (day/month/year)

International Patent Classification (IPC) or both national classification and IPC

H04L 12/18

Applicant

Nokia Corporation et al

1. ☐ The written opinion established by the International Searching Authority:

☐ is

☐ is not

considered to be a written opinion of the International Preliminary Examining Authority.

2. This first (first, etc.) opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☐ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☐ Box No. VII Certain defects in the international application
- ☐ Box No. VIII Certain observations on the international application

3. The applicant is hereby invited to reply to this opinion.

When? See the time limit indicated above. The applicant may, before the expiration of that time limit, request this Authority to grant an extension, see Rule 66.2(e).

How? By submitting a written reply, accompanied, where appropriate, by amendments, according to Rule 66.3. For the form and the language of the amendments, see Rules 66.8 and 66.9.

Also For the examiner's obligation to consider amendments and/or arguments, see Rule 66.4bis.

For an informal communication with the examiner, see Rule 66.6.

For an additional opportunity to submit amendments, see Rule 66.4.

If no reply is filed, the international preliminary examination report will be established on the basis of this opinion.

4. The final date by which the international preliminary report on patentability (Chapter II of the PCT) must be established according to Rule 69.2 is:

21-12-2004

Name and mailing address of the IPEA/SE

Patent- och registreringsverket

Box 5055

S-102 42 STOCKHOLM

Facsimile No. 46 8 667 72 88

Authorized officer

Roger Bou Faisal /LR

Telephone No. 46 8 782 25 00

Box No. I Basis of the opinion

1. With regard to the **language**, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.

☐ This opinion is based on a translation from the original language into the following language _____, which is the language of a translation furnished for the purposes of:

- ☐ international search (under Rules 12.3 and 23.1(b))
☐ publication of the international application (under Rule 12.4)
☐ international preliminary examination (under Rules 55.2 and/or 55.3)

2. With regard to the elements of the international application, this opinion has been established on the basis of (*replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this opinion as "originally filed."*):

☒ the international application as originally filed/furnished

☐ the description:

pages _____ as originally filed/furnished

pages _____ received by this Authority on _____

pages _____ received by this Authority on _____

☐ the claims:

pages _____ as originally filed/furnished

pages _____ as amended (together with any statement) under Article 19

pages _____ received by this Authority on _____

pages _____ received by this Authority on _____

☐ the drawings:

pages _____ as originally filed/furnished

pages _____ received by this Authority on _____

pages _____ received by this Authority on _____

☐ a sequence listing and/or any related table(s) – see Supplemental Box Relating to Sequence Listing.

3. ☐ The amendments have resulted in the cancellation of:

☐ the description, pages _____

☐ the claims, Nos. _____

☐ the drawings, sheets/figs _____

☐ the sequence listing (*specify*): _____

☐ any table(s) related to the sequence listing (*specify*): _____

4. ☐ This opinion has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).

☐ the description, pages _____

☐ the claims, Nos. _____

☐ the drawings, sheets/figs _____

☐ the sequence listing (*specify*): _____

☐ any table(s) related to the sequence listing (*specify*): _____

WRITTEN OPINION OF THE
INTERNATIONAL PRELIMINARY EXAMINING AUTHORITY

International application No.

PCT/IB2002/003373

Box No. V Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)

Claims

Claims

Inventive step (IS)

Claims

1-15

Claims

Industrial applicability (IA)

Claims

Claims

2. Citations and explanations:

Documents cited in the International Search Report:

D1: EP 1071296, A

D2: WO 0158085, A

D3: EP 1093249, A

D4: Xylomenos G et al: "IP MULTICAST FOR MOBILE HOSTS", IEEE Communications magazine, pages 54- 58, XP000683443.

D5: US 6141347, A

D6: WO 0051373, A

The object of the invention is to solve the problem of forwarding data packets with multicast purpose to a connection-oriented network including a cellular access point (CAP, "access node"), without the need of sending one copy on each bearer to the multicast group of mobile nodes, e.g. on each association between the CAP and the mobile node.

D1 relates to a method to transfer data packets over a public data packet network and a mobile data packet network, to a plurality of mobile stations. To transfer public data packets (PU-DP) from an originating terminal (TE) to a plurality of mobile stations (MS1, MS2, MS3, MS4, MS6) over a public data packet network (INTERNET) and a mobile data packet network (GPRS-SYSTEM), the public data packets (PU-DP) are multi-casted through the public data packet network (INTERNET) by means of a multi-cast address (PU-MCA) in an overhead section (PU-H) of the public data packets (PU-DP). In addition, the public data packets (PU-DP) are multi-casted through at least part of the mobile data packet network (GPRS-SYSTEM) by means of a private multi-cast address (PR-MCA) in an overhead section (PR-H) of private data packets (PR-DP) that tunnel the public data packets (PU-DP) through the mobile data packet network (GPRS-SYSTEM).

.../...

Supplemental Box

In case the space in any of the preceding boxes is not sufficient.

Continuation of: BOX V

The invention according to independent claims 1, 11 and 15 differs from D1, which is the closest prior art document, by the access point which in D1 is a GGSN (Gateway GPRS Support node). However, the GGSN and the routing node are considered to execute the same procedures as the access devices and the supporting access device (see paragraph [0022] and claim 1-9). The CAP is supposed to be used in a pure IP data packet network while the GGSN is used in a GPRS data packet network. The multicasting router is mentioned in D1 and so are the public multicast address recognition means and the address association means.

The invention according to the independent claims 1, 11 and 15 is therefore not considered to involve an inventive step, with regard to D1.

Also D2 and D3 disclose similar systems solving the problem of multicasting packets to stations connected to a radio network with the aid of servers, an Internet protocol gateway and Internet protocol network.

In D2 the Internet Protocol network includes a plurality of routers which are capable of utilizing a multicast address within a signal received from a sending source to direct the signal towards one of the plurality of base transceiver stations, and are further capable of utilizing the multicast address within the signal to direct a copy of the signal towards another one of the plurality of base transceiver stations (abstract and claims).

In D3 the cluster units are configured to be members of an IP multicast group specific to the cluster, the IGMP protocol is used to obtain information about to which ports of the plurality of ports the cluster units are connected, the MAC address of a received IP packet is checked, and if said MAC address is a multicast MAC address, the IP destination address of said packet is compared to the unicast IP address shared by the cluster units, if the IP destination address of said packet is the same as the unicast IP address, the packet is forwarded to those ports, to which the cluster units were found to be connected (abstract and claims).

The invention according to dependent claims 2-10, 12-14 involves only steps and details that are considered to be obvious to a person skilled in the art, with reference to any of D1-D3.